

FILE NOTATIONS

Entered in NID File
 Location Map Pinned
 Card Indexed
(Handwritten checkmarks)

Checked by Chief *(Signature)*
 Approval Letter *12-23-69*
 Disapproval Letter

COMPLETION DATA:

Date Well Completed *1-6-70*
 NW..... WW..... TA.....
 GW..... OS..... PA.....
(Handwritten checkmark under PA)

Location Inspected
 Bond released
 State or Fee Land

LOGS FILED

Driller's Log *2-2-70*
 Electric Logs (No.)
 E..... I..... *(Handwritten E)* Dual I Lat..... CR-N..... Micro.....
 HC Sonic CRI..... Lat..... MI-L..... Sonic.....
 Log..... CCLog..... Others.....

Verbal Approval by P.W.B. 12-22-69

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

(Other instructions on
reverse side)

Budget Bureau No. 42-R1425.

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK
DRILL ☒ DEEPEN ☐ PLUG BACK ☐

b. TYPE OF WELL
OIL WELL ☐ GAS WELL ☒ OTHER ☐
SINGLE ZONE ☐ MULTIPLE ZONE ☐

2. NAME OF OPERATOR
Kenneth D. Luff

3. ADDRESS OF OPERATOR
210 Patterson Building, Denver, Colorado

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface

At proposed prod. zone

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*

Vernal 8 miles Northeast

15. DISTANCE FROM PROPOSED*
LOCATION TO NEAREST
PROPERTY OR LEASE LINE, FT.
(Also to nearest drlg. unit line, if any) 818'

16. NO. OF ACRES IN LEASE
1280

17. NO. OF ACRES ASSIGNED
TO THIS WELL 640

18. DISTANCE FROM PROPOSED LOCATION*
TO NEAREST WELL, DRILLING, COMPLETED,
OR APPLIED FOR, ON THIS LEASE, FT. 9400'

19. PROPOSED DEPTH
4300'

20. ROTARY OR CABLE TOOLS
Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)

5009 GR.

22. APPROX. DATE WORK WILL START*

12/26/69

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12-1/4"	8-5/8"	24#	250'	175 saks (circ)
7-5/8"	4-1/2"	9.5#	4300' Uinta	200 saks

Propose to drill 250' of 12-1/4" hole and set 250' of 8-5/8" surface casing. Nipple up Schaffer double hydraulic BOP and test same. Drill 7-7/8" hole to 4300 maintaining proper mud weight to protect against 1700 psi gas bearing sands below a depth of 3500. Check BOP on each tour. Run IES log at total depth. If indicated to be productive, run 9 1/2" 4 1/2" casing and complete as well.

An exception to Rule C3(b) is requested for this location as it is about 4750' from the Luff #1 Joyce Luff Federal (SW SE Sec. 21, T6S, R21E) and completed as a Uinta gas well. *9 # 3 Lingelbach*

This exception is requested under the provisions of Rule C3(c) 1 & 2 as the necessity is based on topographic conditions and the leases affected by the proposed well are controlled by applicants.

Blanket Bond is held by the Operator in the State of Utah.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24. SIGNED Kenneth D. Luff TITLE Operator DATE _____

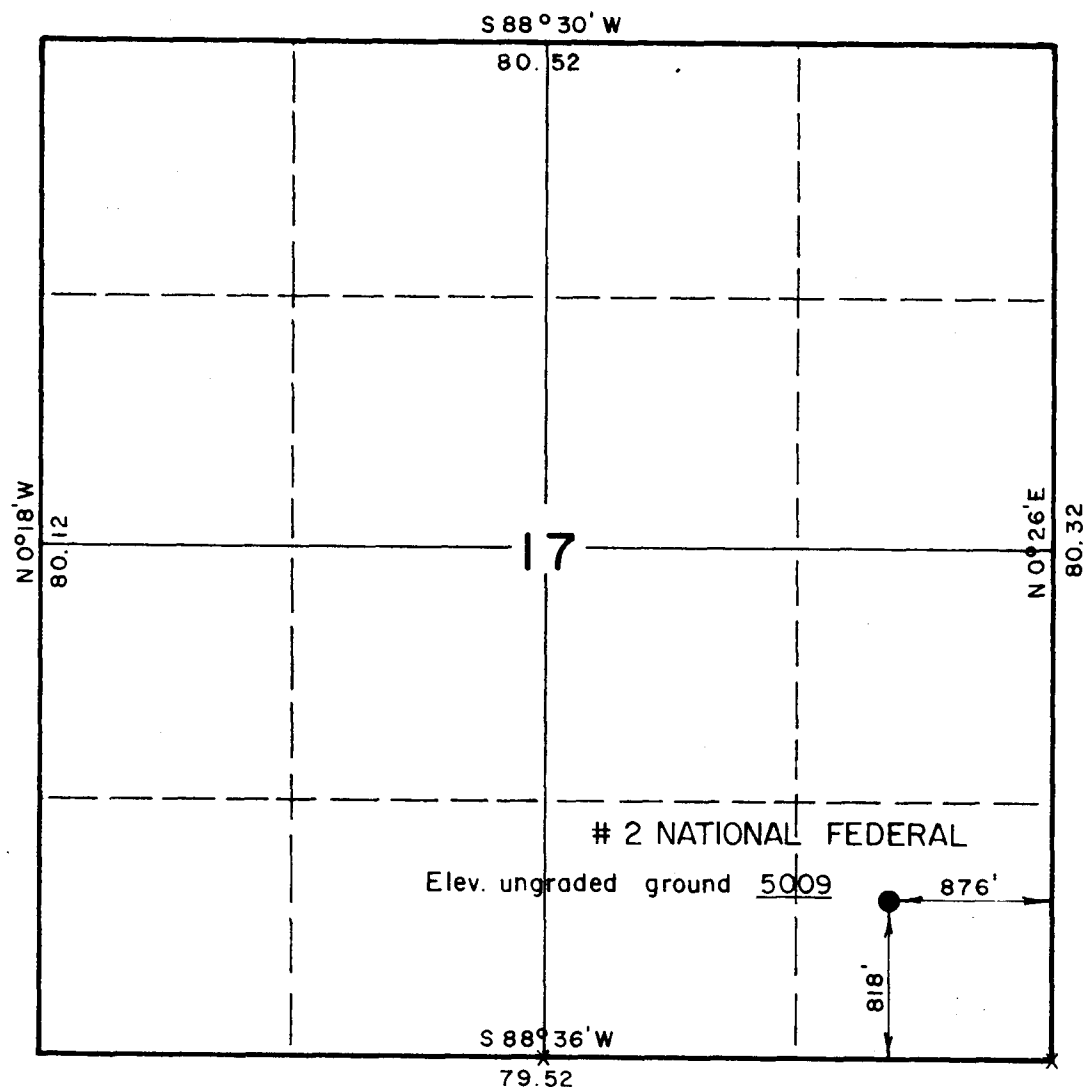
(This space for Federal or State office use)

PERMIT NO. 13-047-30075 APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

*See Instructions On Reverse Side

T 6 S, R 21 E, SLB & M



X = Corners Located (Brass Caps)

PROJECT

KENNETH D. LUFF

WELL LOCATION AS SHOWN IN
THE SE 1/4 SE 1/4, SECTION 17,
T 6 S, R 21 E, SLB & M. UTAH
COUNTY, UTAH.



CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM
FIELD NOTES OF SURVEYS MADE BY ME OR UNDER MY
SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE
BEST OF MY KNOWLEDGE AND BELIEF.

Gene Stewart

REGISTERED LAND SURVEYOR
REGISTRATION NO. 3154
STATE OF UTAH

UTAH ENGINEERING & LAND SURVEYING
P.O. BOX Q - 110 EAST - FIRST SOUTH
VERNAL, UTAH - 84078

SCALE	1" = 1000'	DATE	2 Dec. 1969
PARTY	L.D.T. & K.M.	REFERENCES	GLO Township Plat
WEATHER	Clear & Cold	FILE	K.D. LUFF

December 23, 1969

Kenneth D. Luff
210 Patterson Building
Denver, Colorado 80202

Re: Well No. National Government #2
Sec. 17, T. 6 S, R. 21 E,
Uintah County, Utah

Dear Mr. Luff:

Insofar as this office is concerned, approval to drill the above mentioned well is hereby granted in accordance with Rule C-3 (c), and with verbal approval granted by Mr. Paul Burchell on December 22, 1969.

Should you determine that it will be necessary to plug and abandon this well, you are hereby requested to immediately notify the following:

PAUL W. BURCHELL - Chief Petroleum Engineer
HOME: 277-2890
OFFICE: 328-5771

This approval terminates within 90 days if the well has not been spudded-in within said period. Also, enclosed please find Form OGC-8-X, which is to be completed whether or not water sands (aquifers) are encountered during drilling. Your cooperation with respect to completing this form will be greatly appreciated.

The API number assigned to this well is 43-047-30075 (see Bulletin D-12 published by the American Petroleum Institute).

Very truly yours,

DIVISION OF OIL & GAS CONSERVATION

CLEON B. FEIGHT
DIRECTOR

CBF:sd
cc: U.S. Geological Survey

READ WHAT OUR CUSTOMERS SAY

THESE UNSOLICITED LETTERS ARE MERELY SAMPLES OF THE TYPE WE RECEIVE EVERY DAY FROM BOTH THE PROFESSIONAL APPLICATOR AND THE CONSUMER.

" - have used it on all of my asphalt tile floors and believe it or not it sure is a God send for floor coating, It makes the floors just like new again , as a matter of fact, better than new. "

F. F. L.
Wisconsin Dells, Wisc.

" In trying FLEX-COTE floor products I find this to be the best I have ever seen."

E. S.
Philadelphia, Pa.

"- I have talked with personel from Westinghouse Electric Corp. and they are using your FLEX-COTE Floor Finish in the M-20 section of the plant on a white tile floor. So far it has been with very excellent success."

Ray's
Akron, N. Y.

"We have just received and tested the introductory 3-part FLEX-COTE Floor System and were amazed and pleased with the results. Some people who watched our demonstration had the same to say as we did."

R. Y. O.,
Honolulu, Hawaii

" I like your Floor Care System very much. "

Mrs R. F.
Stevens Point, Wisc.

" I tried my initial order in an apartment building. It gave such good results that I received a floor maintenance contract.

C. K.
Baltimore, Md

Schmitt #2 Natany Cove

sec 17
G S 21 E

T.P. 4187

"B" - 3767

1st ss 3840 - all met

1st by ss up to 2900

(4) 4000 = 3950 to 3800

(2) 25 m - 2450 to 2850

(3) 25 m - 275 to 175

8 m - 0 228

(4) 5 m / make / mud
9.6 ft.

John Luff

PWB

11/6/70

GIC #1 (no more
wells)

might complete

have for unloading
will call USGS
in survey.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE*

(See other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R355.5.

WELL COMPLETION OR RECOMPLETION REPORT AND LOG *

5. LEASE DESIGNATION AND SERIAL NO.

U-031828

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

National Government

9. WELL NO.

2

10. FIELD AND/POOL, OR WILDCAT

Horsehoe Bend

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA

Sec. 17, T6S, R21E

12. COUNTY OR PARISH
Uintah

13. STATE
Utah

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☐ DRY ☒ Other

b. TYPE OF COMPLETION:

NEW WELL ☒ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ Other Dry

2. NAME OF OPERATOR

Kenneth D. Luff

3. ADDRESS OF OPERATOR

210 Patterson Building, Denver, Colorado 80202

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*

At surface 876 feet x 818 feet

At top prod. interval reported below

At total depth

14. PERMIT NO.

43-047-30075

DATE ISSUED

12/23/69

15. DATE SPUDDED

12/27/69

16. DATE T.D. REACHED

1/6/70

17. DATE COMPL. (Ready to prod.)

18. ELEVATIONS (DF, REB, RT, GR, ETC.)*

5009 Grd. - 5020 KB

19. ELEV. CASINGHEAD

20. TOTAL DEPTH, MD & TVD

4187'

21. PLUG, BACK T.D., MD & TVD

22. IF MULTIPLE COMPL., HOW MANY*

23. INTERVALS DRILLED BY

→

ROTARY TOOLS

X

CABLE TOOLS

No

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*

Dry hole.

25. WAS DIRECTIONAL SURVEY MADE

No

26. TYPE ELECTRIC AND OTHER LOGS RUN

Schlumberger IES Aldrite Mud Logging Company

27. WAS WELL CORED

No

28. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
8 5/8"	240	225'	12 1/4"	200 sacks	None

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)

31. PERFORATION RECORD (Interval, size and number)

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED

33.* PRODUCTION

DATE FIRST PRODUCTION		PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump)				WELL STATUS (Producing or shut-in)	
						Dry hole.	
DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
			→				
FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)	
		→					

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)

TEST WITNESSED BY

35. LIST OF ATTACHMENTS

Geologic Report & Log.

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED

Kenneth D. Luff

TITLE

Manager

DATE

1/20/70

*(See Instructions and Spaces for Additional Data on Reverse Side)

INSTRUCTIONS

General: This form is designed for submitting a complete and correct well completion report and log on all types of lands and leases to either a Federal agency or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office. See instructions on items 22 and 24, and 33, below regarding separate reports for separate completions.

If not filed prior to the time this summary record is submitted, copies of all currently available logs (drillers, geologists, sample and core analysis, all types electric, etc.), formations and/or State office. See instructions on items 22 and 27, and 29, below regarding separate reports for separate companies. All attachments should be attached hereto, to the extent required by applicable Federal and/or State laws and regulations. All attachments should be listed on this form, see item 35.

Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 18: Indicate which elevation is used as reference (where not otherwise shown) for depth measurements given in other spaces on this form and in any attachments.

Items 22 and 24: If this well is completed for separate production from more than one interval zone (multiple completion), so state in item 22, and in item 24 show the producing interval, or intervals, top(s), bottom(s) and name(s) (if any) for only the interval reported in item 33. Submit a separate report (page) on this form, adequately identified, for each additional interval to be separately produced, showing the additional data pertinent to such interval.

Item 29: "Sacks Cement": Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the cementing tool. For each additional interval to be separately produced, showing the additional data pertinent to such interval.

Item 30: Submit a separate completion report on this form for each interval to be separately produced. (See instruction for items 22 and 24 above.)

37. SUMMARY OF POROUS ZONES: SHOW ALL IMPORTANT ZONES OF POROSITY AND CONTENTS THEREOF; CORED INTERVALS; AND ALL DRILL-STEM TESTS, INCLUDING DEPTH INTERVAL TESTED, CUSHION USED, TIME TOOL OPEN, FLOWING AND SHUT-IN PRESSURES, AND RECOVERIES		38. GEOLOGIC MARKERS	
FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.
			<p>"A" Marker 3612</p> <p>"B" Marker 3767 (+1253)</p> <p>"C" Marker 3882</p> <p>"D" Marker 3974</p> <p>Green River Trans. 4102</p>

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEYSUBMIT IN ☒ REVERSE SIDE
(Other instructions on reverse side)Form approved.
Budget Bureau No. 42-R1424.

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>	6. LEASE DESIGNATION AND SERIAL NO.
2. NAME OF OPERATOR X Dry Hole	7. UNIT AGREEMENT NAME
3. ADDRESS OF OPERATOR Benjamin D. Luff	8. FARM OR LEASE NAME
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)* Sales Station Building, Denver, Colorado 80202 At surface 876 feet x 818 feet	9. National Government
14. PERMIT NO.	10. FIELD AND POOL OR WILDCAT
15. ELEVATIONS (Show whether DF, RT, GR, etc.)	11. COUNTY OR STATE Utah

16. 47-30075 Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data	17. Utah
NOTICE OF INTENTION TO:	SUBSEQUENT REPORT OF:
TEST WATER SHUT-OFF <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDONMENT <input checked="" type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	(Other) <input type="checkbox"/>
(Other) <input type="checkbox"/>	(Other) <input type="checkbox"/>

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Set cement plugs as follows to abandon well:

40 sacks - 3950-3800
25 sacks - 2950-2850
25 sacks - 275-175
5 sacks - Surface with Marker

Verbal approval given by John Finnegan on January 6, 1970.

18. I hereby certify that the foregoing is true and correct

SIGNED Benjamin D. LuffTITLE OperatorDATE 1/30/70

(This space for Federal or State office use)

APPROVED BY _____
CONDITIONS OF APPROVAL, IF ANY:

TITLE _____

DATE _____

*See Instructions on Reverse Side

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE*
(Other instructions on re-
verse side)

Form approved.
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.

U-031828

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

National Government

9. WELL NO.

2

10. FIELD AND POOL, OR WILDCAT

Horseshoe Bend

11. SEC., T., R., M., OR BLK. AND
SURVEY OR AREA

Sec. 17, T6S, R21E

12. COUNTY OR PARISH

Utah

13. STATE

Utah

1. OIL ☐ WELL GAS ☒ WELL OTHER **Dry Hole**

2. NAME OF OPERATOR

Kenneth D. Luff

3. ADDRESS OF OPERATOR

210 Patterson Building, Denver, Colorado 80202

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*

See also space 17 below.)

At surface **876 feet x 818 feet**

14. PERMIT NO.

43-047-30075

15. ELEVATIONS (Show whether DF, RT, GR, etc.)

5009 Grd. - 5020 KB

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF ☐

FRACTURE TREAT ☐

SHOOT OR ACIDIZE ☐

REPAIR WELL ☐

(Other) ☐

PULL OR ALTER CASING ☐

MULTIPLE COMPLETE ☐

ABANDON* ☐

CHANGE PLANS ☐

SUBSEQUENT REPORT OF:

WATER SHUT-OFF ☐

FRACTURE TREATMENT ☐

SHOOTING OR ACIDIZING ☐

(Other) ☐

REPAIRING WELL ☐

ALTERING CASING ☐

ABANDONMENT* ☒

(NOTE: Report results of multiple completion on Well
Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Set cement plugs as follows to abandon well:

40 sacks - 3950-3800

25 sacks - 2950-2850

25 sacks - 275-175

5 sacks - Surface with Marker

Verbal approval given by John Finnegan on January 6, 1970.

18. I hereby certify that the foregoing is true and correct

SIGNED

Kenneth D. Luff

TITLE

Operator

DATE

1/30/70

(This space for Federal or State office use)

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

PE

WELL SUMMARY

Operator: Kenneth D. Luff

Well: #2 National Government

Location: 876 fsl x 818 fsl Section 17, T6S, R21E
Uintah County, Utah

Elevation: 5009 Grd. - 5020 KB

Contractor: Barker Drilling & Well Service

Rig Type: T-12 (Bowden)

Commenced: December 27, 1969

Completed: January 6, 1970

Total Depth: 4187 Driller - 4156 Schlumberger

Casing: Surface: 8 jts. of 8 5/8", 24#, landed at 225' and
set with 200 sacks of Type G regular cement
with 3% calcium.
Production: Dry hole.

Hole Size: 12 1/4" to 228; 7 7/8" to 4187'

DST: None

Logging Services: Schlumberger IES 582-4156
Aldirita Mud Logging Company 3500-4187

Samples: None kept.

Geologist: Kenneth D. Luff - Al Chatham

Status: Dry and abandoned.

CHRONOLOGIC WELL HISTORY

- 12/27/69 - Rigging up Barker Ideco rig #6. Mixing mud @ 4:00 p.m. Drilled and set rat hole from 5:00 p.m. to 9:00 p.m. Spudded 12 1/4" surface hole at 9:00 p.m. and drilled to 90'.
Total Footage 90'
- 12/28/69 - Drilled 12 1/4" surface hole to 228'. Conditioned hole and ran 8 joints of 8 5/8" surface casing landed at 225' with 200 sacks of Type G regular cement with 3% calcium, plug down at 1:30 p.m. Had good circulation throughout job. Deviation 1/2 degree @ 101'. W.O.C. and cleaning out mud pits. Nippling up to B.O.P. Drilled cement and plug at 9:00 p.m. Drilled ahead with water to 470'.
Total Footage 380'
- 12/29/69 - Drilled 7 7/8" hole to 1640' with water. Made trip for bit #2 at 741' and for bit #3 @ 1373'. Several hours down time to repair draw works motor and rotary chain. Deviation 1 1/4 degree @ 741' and 3/4 degree @ 1373'.
Total Footage 1170'
- 12/30/69 - Drilled 7 7/8" hole to 2322' with water. Made trip for bit #4 @ 1993 and #5 @ 2087'. Deviation @ 1993 1 degree. 45' of fill on trip @ 1993'.
Total Footage 682'
- 12/31/69 - Drilled 7 7/8" hole to 2984' with water. Made trip for bit #6 @ 2565. Deviation 1 degree @ 2574.
Total Footage 662'
- 1/1/70 - Drilled 7 7/8" hole to 3347 with water. Made trip for bit #7 @ 2990 and #8 @ 3176. Replaced 8 joints of drill pipe on trip @ 3176'. Washed 100' to bottom on trip @ 3176'.
Total Footage 363'
- 1/2/70 - Drilled to 3582' with mud. Started mixing mud @ 2:00 p.m. at a depth of 3500'. Made trip for bit #9 @ 3437. Cleaned pits on trip @ 3437. Plugged bit when started to mud up--removed joint of drill pipe with hole.
Total Footage 235'
- 1/3/70 - Drilled to 3893 with mud. Made trip for bit #10 @ 3714'; worked on tool joints on same trip.
Total Footage 311'
- 1/4/70 - Drilled to 4068 with mud. Made trip for bit #11 @ 3917; dressed bad tool joints on trip. On trip Kelly froze in rat hole. Washed 120' to bottom.
Total Footage 175'
- 1/5/70 - Drilled to 4187 with mud. Short tripped and conditioned hole

for 2 hours to log hole. Reached total depth at 4:45 p.m. Ran
Schlumberger IES Log. Went in hole open ended to plug well.
Total Footage 119'

1/6/70 - Plugged well as follows:

40 sacks - 3950-3800
25 sacks - 2950-2850
25 sacks - 275-175
5 sacks - Surface

Job completed @ 6:00 a.m.

FORMATION TOPS

<u>Uinta</u>	<u>Surface</u>
"A" Marker	3612
"B" Marker	3767 (+1253)
"C" Marker	3882
"D" Marker	3974
Green River Trans.	4102

MIDNIGHT DRILLING DEPTHS

<u>Date</u>	<u>Depth</u>	<u>Footage</u>
12/27/69	90'	90'
12/28/69	470	380
12/29/69	1640	1170
12/30/69	2322	682
12/31/69	2984	662
1/1/70	3347	363
1/2/70	3582	235
1/3/70	3893	311
1/4/70	4187	119

DEVIATION SURVEYS

<u>Depth</u>	<u>Deviation</u>	<u>Pump Press.</u>	<u>Weight</u>	<u>RPM</u>
101	1/2 degree			
741	1 1/4 degree			
1373	3/4 degree			
1983	1 degree			
2574	1 degree			
3437	3/4 degree	780#	40,000	90

BIT RECORD

<u>No.</u>	<u>Size</u>	<u>Make</u>	<u>Type</u>	<u>In</u>	<u>Out</u>	<u>Footage</u>	<u>Hours</u>	<u>#</u>
1	12 1/4"	Smith	R.R.	0	228	228	13	R.R.
2	7 7/8	HTC	OSC3A	228	741	513	9 1/2	KH817
3	7 7/8	Smith	DTTJ	741	1373	632	7 3/4	CH118
4	7 7/8	Smith	DTTJ	1373	1983	610	10 1/4	CH082
5	7 7/8	Smith	DTTJ	1983	2087	104	3 3/4	CE949
6	7 7/8	Smith	DTTJ	2087	2574	487	11 1/2	CK073
7	7 7/8	Smith	DTTJ	2574	2990	416	12 3/4	CF009
8	7 7/8	HTC	OSC3AJ	2990	3176	186	7	PO115
9	7 7/8	Reed	YT3TJ	3176	3437	261	10	562675
10	7 7/8	Smith	DGTJ	3437	3714	277	13	CW374
11	7 7/8	Smith	STC	3714	3916	102	12 1/4	CW555
12	7 7/8	Smith	DGTJ	3916	4118	202	14	BW547
13	7 7/8	Smith	DGTJ	4118	4187	69	6	--

DAILY MUD CHARACTERISTICS

<u>Date</u>	<u>Depth</u>	<u>Type</u>	<u>Weight</u>	<u>Visc</u>	<u>W.L.</u>	<u>PH</u>	<u>% Sd.</u>
1/2/70	3580	Chem-Gel	9.0	35	12.3	9.5	-
1/3/70	3759	" "	9.2	35	8.7	9.0	-
1/4/70	3959	" "	9.6	37	7.2	10.5	-
1/5/70	4133	" "	9.6	40	7.8	9.5	-

Note: Clear water was used as a drilling fluid to a depth of 3500', at which depth the well was mudded up. The well was serviced by Baroid.

LITHOLOGY

Refer to lithologic descriptions shown on mud logger report and log of hole.

SIGNIFICANT MUD LOGGER SHOWS

- 3864-69 - 10 units total gas; all methane. Mud weight 9.3#/gal.
(Gas productive but very limited)
- 4013-16 - 50 units total gas; trace ethane and propane. Mud weight 9.5#/gal.
(Gas productive but very limited)
- 4050-53 - 12 units total gas; mostly methane with some ethane and propane.
Mud weight 9.5#/gal. (Probably water productive)
- 4058-63 - 8 units total gas. Mostly methane with trace ethane and propane.
Mud weight 9.5#/gal. (Tight)
- 4090-94 - 25 units total gas. Mostly methane with some ethane and propane.
Trace of oil staining. Mud weight 9.6#/gal. (Probably water productive)
- 4124-27 - 18 units total gas. Mostly methane with some ethane and propane.
Good oil staining in sandstone. Mud weight 9.6#/gal. (Probably water productive)
- 4134-36 - 15 units total gas. Same comments as on sand from 4124-27.
- 4146-52 - 10 units total gas. Gases methane, ethane and propane. Heavy oil stain in sandstone. Mud weight 9.6#/gal. (Probably water productive)
- 4160-65 - 35 units total gas. Gases methane, ethane, propane and butane.
Heavy oil stain in sandstone. Mud weight 9.6#/gal. (Probably water productive)
- 4175-77 - 60 units total gas. Same comments as on sand from 4160-65'.